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MTC 6888.2 (39-21(52925)C)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of David A. Morgenstern
Serial No. 10/687.541

Art Unit 1746

Serial No. 10/687,541 Filed October 16, 2003 Confirmation No. 7748

For USE OF METAL SUPPORTED COPPER CATALYSTS FOR REFORMING ALCOHOLS

March 19, 2004

COMMISSIONER FOR PATENTS P.O. BOX 1450 ALEXANDRIA, VIRGINIA 22313-1450

SIR:

INFORMATION DISCLOSURE STATEMENT

In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the duty of disclosure set forth in 37 C.F.R. 1.56, applicant submits the attached PTO/SB/08A for consideration by the Patent and Trademark Office in the above-entitled application and to be made of record therein. In accordance with the OG notice of August 5, 2003 partially waiving the requirements of 37 C.F.R. 1.98(a)(2)(i), copies of the U.S. patent documents are not supplied. Applicant submits herewith copies of the foreign patent documents/literature references.

Applicant has not provided an English language translation of EP 0 648 534 A1, but notes that this publication corresponds to U.S. Patent No. 5,536,694.

Applicant has provided an English language Scifinder abstract for German Patent No. 2713374 which corresponds to U.S. Patent No. 4,287,365.

Respectfully submitted,

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	FORMATION	DISC	OSURE	Application Number	10/687,541
	TATEMENT B			Filing Date	October 16, 2003
(use as many sheets as necessary)				Confirmation Number	7748
				First Named Inventor	David A. Morgenstern
				Group Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	1	of	8	Attorney Docket No.	MTC 6888.2 (39-21(52925)C)

U.S. PATENT DOCUMENTS U.S. Patent Document Date of Publication of Cited Cite Kind Name of Patentee or Applicant of Examiner Document Code² Initials* No.1 Cited Document MM-DD-YYYY Number (if known) 07-28-1970 Buswell et al. 1 3,522,0191 2 4,024,044 Brannan et al. 05-17-1977 3 4,287,365 Becker et al. 09-01-1981 4 03-08-1994 5,292,936 Franczyk 5 07-16-1996 5,536,694 Schuetz et al. 6 5,627,125 Ebner et al. 05-06-1997 7 5,928,614 Autenrieth et al. 07-27-1999 8 5,935,277 Autenrieth et al. 08-10-1999 9 B1 Manikowski, Jr. et al. 04-03-2001 6,209,494 10 6,284,703 **B1** Ostgard et al. 09-04-2001 11 6,309,758 **B**1 Schmidt 10-30-2001 12 2002/0019564 02-14-2002 **A1** Morgenstern et al.

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	13	6,376,	200 ===	B1	Morgenstern et al.	04-23-2002			
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Examiner Initials*	Cite No. ¹	Office	Number⁴	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Τ ⁶		
	14	EP	0 648 534	A1	Degussa (DE)	04-19-1995	Α		
	15	wo	01/00320	A1	Lisse et al.	01-04-2001			
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	AGRELL, Johan, et al., "Catalytic Hydrogen Generation from Methanol", <i>The Royal Society of Chemistry</i> , 2002, Pages 67-132, Volume 16								
	ALEJO, L., et al., "Partial Oxidation of Methanol to Produce Hydrogen over Cu-Zn-based Catalysts", Applied Catalysis A: General, 1997, Pages 281-297, Volume 162								

Examiner	Date	
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Sheet	3	of	8	Attorney Docket No.	MTC 6888.2 (39-21(52925)C)	

18	AMPHLETT, J.C., et al., "A Deactivation Model for Methanol-Steam Reformation on Cu/CnO/Al ₂ O ₃ Catalyst for Optimizing the Production of Fuel-Cell Hydrogen", <i>Studies in Surface Science and Catalysis</i> , 2001, Pages 205-212, Volume 139	
19	AMPHLETT, J.C., et al., "On Board Hydrogen Purification for Steam Reformation/PEM Fuel Cell Vehicle Power Plants", <i>International Journal of Hydrogen Energy</i> , 1996, Pages 673-678, Volume 21, Number 8	
20	APPLEBY, A.J., "Fuel Cells Can Power Cleaner Buses and Cars, But Key Engineering and Economic Obstacls Will Delay Widespread Adoption of the Technology", The Electrochemical Engine for Vehicles, <i>Scientific American</i> , July 1999, Pages 74-79	
21	AUGUSTINE, R.L., Catalytic Hydrogenation Techniques and Applications in Organic Synthesis, 1965, Pages 147-149, Marcel Dekker, Inc., New York City, NY	
22	BAUER, C.G., et al., "Effect of Hydrogen Addition on the Performance of Methane-Fuelced Vehicles. Part I: Effect on S.I. Engine Performance", <i>International Journal of Hydrogen Energy</i> , 2001, Pages 55-70, Volume 26	
23	BECKER, H.J., et al., Scifinder Abstract for German Patent No. 2,713,374 (1977)	Α
24	BLACK, F., "An Overview of the Technical Implications of Methanol and Ethanol as Highway Motor Vehicle Fuels", SAE Technical Paper Series, No. 912413, October 1991, Pages 1-30	
25	BREEN, J.P., et al., "Mechanistic Aspects of the Steam Reforming of Methanol over a CuO/ZnO/ZrO ₂ /Al ₂ O ₃ Catalyst", <i>Chem. Commun.</i> , 1999, Pages 2247-2248, The Royal Society of Chemistry, Cambridge, United Kingdom	
26	BRIDGEWATER, A.J., et al., "Methanol Synthesis Over Raney Copper-Zinc Catalysts. II. Optimization of Alloy Composition and Catalyst Preparation", <i>Applied Catalysis</i> , 1983, Pages 369-382, Volume 7	
27	CAIRNS, J.F., et al., "Advances in ICI's Activated Cathode Technology for Chlor-Alkali Production", Advances in Mathematical Modeling and Simulation of Electrochemical Processes and Oxygen Depolarized Cathodes, 1998, Pages 289-296	

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Sheet	Sheet 4 of 8		Attorney Docket No.	MTC 6888.2 (39-21(52925)C)		

28	CAVALLARO, S., et al., "Hydrogen Produced from Ethanol for Internal Reforming Molten Carbonate Fuel Cell", <i>Journal of Power Sources</i> , 2001, Pages 198-204, Volume 102
29	CHENG, Wu-Hsun, "Development of Methanol Decomposition Catalysts for Production of H ₂ and CO", Accounts of Chemical Research, 1999, Pages 685-691, Volume 32, Number 8
30	CHENG, Wu-Hsun, "Reaction and XRD Studies on Cu Based Methanol Decomposition Catalysts: Role of Constituents and Development of High-Activity Multicomponent Catalysts", <i>Applied Catalysis</i> A: General, 1995, Pages 13-30, Volume 130
31	DAS, L.M., "Hydrogen Engines: A View of the Past and a Look into the Future", <i>International Journal of Hydrogen Energy</i> , 1990, Pages 425-443, Volume 15, Number 6
32	DAVIS, G.W., et al., "Ethanol Vehicle Cold Start Improvement When Using a Hydrogen Supplemented E85 Fuel", <i>Proc. Intersoc. Energy Convers. Eng. Con.</i> , 2000, Pages 303-308, Volume 1, Number 35
33	FATSIKOSTAS, A.N., "Steam Reforming of Biomass-Derived Ethanol for the Production of Hydrogen for Fuel Cell Applications", CHEMCOMM Communication, 2001
34	FIERRO, V., et al., "Oxidative Reforming of Biomass Derived Ethanol for Hydrogen Production in Fuel Cell Applications", <i>Catalysis Today</i> , 2002, Pages 141-144, Volume 75
35	FRENI, S., et al., "Hydrogen Production by Steam Reforming of Ethanol: A Two Step Process", React. Kinet. Catal. Lett., 2000, Pages 143-152, Volume 71, Number 1
36	GATES, S.M., et al., "Bond Activation Sequence Observed in the Chemisorption and Surface Reaction of Ethanol on Ni(111)", <i>Surface Science</i> , 1986, Pages 111-134, Volume 171, North-Holland, Amsterdam
37	GERSTEN et al., "Thermal Conductivity", <i>The Physics and Chemistry of Material</i> , 2001, Page 144, Wiley & Sons, New York City, New York
38	GREINER, L., et al., "Engine Cold-Start with Dissociated Methanol", Proc. Int. Symp. Alcohol Fuels Technol., Issue CONF-790520, Paper III-50, 1979, NTIS, Springfield, Virginia (Abstract)

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Sheet	Sheet 5 of 8		Attorney Docket No.	MTC 6888.2 (39-21(52925)C)	

3	39	GÜNTER, M.M., et al., "Redox Behavior of Copper Oxide/Zinc Oxide Catalysts in the Steam Reforming of Methanol Studied by <i>in situ</i> X-Ray Diffraction and Absorption Spectroscopy", <i>Journal of Catalysis</i> , 2001, Pages 133-149, Volume 203, Number 1			
4	40	HAGA, F., et al., "Catalytic Properties of Supported Cobalt Catalysts for Steam Reforming of Ethanol", Catalysis Letters, 1997, Pages 223-227, Volume 48			
4	41	HUSS, C., "Future Propulsion Systems and Fuels", <i>Atomwirtschaft-Atomtechnik</i> , December 2002, Pages 760-766, Volume 47, Number 12, Federal Republic of Germany (Abstract)			
4	42	IDRISS, H., et al., "Reactions of Acetaldehyde on CeO ₂ and Ceo ₂ -Supported Catalysts", <i>Journal of Catalysis</i> , 1995, Pages 219-237, Volume 155			
4	43	IDRISS, H., et al., "Reactions of Ethanol Over Metal Oxides", <i>Journal of Molecular Catalysis A:</i> Chemical, March 2000, Pages 201-212, Volume 152, Issues 1-2			
4	44	IWASA, N., et al., "Reforming of Ethanol-Dehydrogenation to Ethyl Acetate and Steam Reforming to Acetic Acid Over Copper-Based Catalysts", <i>Bull. Chem. Soc. Jpn.</i> , 1991, Pages 2619-2623, Volume 64, The Chemical Society of Japan			
4	45	JIANG, C.J., et al., "Kinetic Mechanism for the Reaction Between Methanol and Water Over a Cu-ZnO-Al ₂ O ₃ Catalyst", <i>Applied Catalysis A: General</i> , 1993, Pages 145-158, Volume 97			
4	46	KELLER, J., et al., "Hydrogen Fueled Engines in Hybrid Vehicles", Society of Automotive Engineers, 2001, Pages 117-122			
4	47	KLOUZ, V., et al., "Ethanol Reforming for Hydrogen Production in a Hybrid Electric Vehicle: Process Optimisation", <i>Journal of Power Sources</i> , 2002, Pages 26-34, Volume 105			
4	48	LIEBER, E., et al., "The Uses of Raney Nickel", Pages 417-455			
4	49	LLOYD, et al., Catalyst Handbook, 2nd Ed., 1996, Pages 309-312, M.V. Twigg Ed., Manson Publishing, London, England			

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Sheet	6	of	8	Attorney Docket No.	MTC 6888.2 (39-21(52925)C)

LUENGO, C.A., et al., "A Novel Catalyst System for Ethanol Gasification", <i>International Journal of Hydrogen Energy</i> , 1992, Pages 677-681, Volume 17, Number 9				
MALAKOFF, D., "U.S. Supercars: Around the Corner, or Running on Empty?", <i>Science Magazine</i> , July 30, 1999, Pages 680-685, Volume 285				
MARIÑO, F., et al., "Hydrogen Production from Steam Reforming of Bioethanol Using Cu/Ni/K/γ-Al ₂ O ₃ Catalysts. Effect of Ni", <i>International Journal of Hydrogen Energy</i> , 2001, Pages 665-668, Volume 26				
MARIÑO, F., et al., "Steam Reforming of Ethanol Using Cu-Ni Supported Catalysts", Studies in Surface Science and Catalysis, 2000, Pages 2147-2152, Volume 130				
MATSUMURA, Y., et al., "Catalytic Methanol Decomposition to Carbon Monoxide and Hydrogen Over Nickel Supported on Silica", <i>Journal of Molecular Catalysis A: Chemical</i> , March 2000, Pages 157-165, Volume 152, Issues 1-2				
MATTHEWS, R.D., "Internal Combusion Engines", Chapter 59, Mechanical Engineers' Handbook, 2nd Ed, 1998, Pages 1801-1822				
MURCIA-MASCARÓS, S., et al., "Oxidative Methanol Reforming Reactions on CuZnAl Catalysts Derived from Hydrotalcite-like Precursors", <i>Journal of Catalysis</i> , 2001, Pages 338-347, Volume 198				
ORCHARD, J.P., et al., " Preparation and Properties of Raney Nickel-Cobalt Catalysts", <i>Journal of Catalysis</i> , 1983, Pages, 189-199, Volume 84				
PETTERSSON, L.J., "State of the Art of Multi-Fuel Reformers for Fuel Cell Vehicles: Problem Identification and Research Needs", <i>International Journal of Hydrogen Energy</i> , 2001, Pages 243-264, Volume 26				
REITZ, T.L., et al., "Methanol Reforming Over CuO/ZnO Under Oxidizing Conditions", Studies in Surface Science and Catalysis, 2000, Pages 3645-3650, Volume 130				
REITZ, T.L., et al., "Time-Resolved XANES Investigation of CuO/ZnO in the Oxidative Methanol Reforming Reaction", <i>Journal of Catalysis</i> , 2001, Pages 193-201, Volume 199				

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Sheet	7	of	8	Attorney Docket No.	MTC 6888.2 (39-21(52925)C)

61	SCHMIDT, S.R., "Surfaces of Raney® Catalysts", Catalysis of Organic Reactions, 1995, Scaros and Prunier eds., Pages 45-59
62	SCHOUBYE, P., "Methanation of CO on Some Ni Catalysts", <i>Journal of Catalysis</i> , 1969, Pages 238-246, Volume 14
63	SHENG, PY., et al., "H ₂ Production from Ethanol over Rh-Pt/CeO ₂ Catalysts: The Role of Rh for the Efficient Dissociation of the Carbon-Carbon Bond", <i>Journal of Catalysis</i> , 2002, Pages 393-403, Volume 208
64	SILLITTO, S.M.A., et al., "Electrochemical Testing and Structural Characterization of Nickel-based Catalytic Coatings Produced by Direct Spraying", Materials Research Society Symposium Proceedings, 1999, Pages 23-29
65	TROMP, T.K., et al., "Potential Environmental Impact of a Hydrogen Economy on the Stratosphere", Science Magazine, June 13, 2003, Pages 1740-1742, Volume 300
66	TU, YJ., et al., "Effect of Chromium Promoter on Copper Catalysts in Ethanol Dehydrogenation", Journal of Chemical Technology and Biotechnology, 1994, Pages 141-147, Volume 59; Issue 2 (Abstract)
67	TULLO, A. H., "A Fuel Cell in Every Car", C&EN Northeast New Bureau, March 5, 2001, Pages 19-22
68	VELU, S., et al., "Selective Production of Hydrogen for Fuel Cells Via Oxidative Steam Reforming of Methanol Over CuZnAl(Zr)-oxide Catalysts", <i>Applied Catalysis A: General</i> , May 14, 2001, Pages 47-63, Volume 213, Issue 1
69	WAINWRIGHT, M.S., et al., "Raney Nickel-Copper Catalysts II. Surface and Pore Structures", Journal of Catalysis, 1980, Pages 124-131, Volume 64
70	WAINWRIGHT, M.S., "Raney Copper and Raney Copper-Zinc Catalysts", <i>Chem. Ind.</i> , 1996, Pages 213-230, Volume 68

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71	YEE, A., et al., "A Study of the Reactions of Ethanol on CeO ₂ and Pd/CeO ₂ by Steady State Reactions, Termperature Programmed Desorpotion, and <i>In Situ</i> FT-IR", <i>Journal of Catalysis</i> , 1999, Pages 279-295, Volume 186
72	YOUNG, D.J., et al., "Raney Nickel-Copper Catalysts I. Structure and Leaching Properties", <i>Journal of Catalysis</i> , 1980, Pages 116-123, Volume 64
 73	BASF Catalyst for Daimler-Benz Car, European Chemical News, May 1998, Page 22
74	EPRI Journal, May/June 1997, Pages 8-17
75	Hawley's Condensed Chemical Dictionary, 13th Ed., 1997, Pages 621-622, Rev. by R. J. Lewis, Sr., Van Nostrand Reinhold, New York City, NY
76	Hawley's Condensed Chemical Dictionary, 13th Ed., Page 955, Rev. by R. J. Lewis, Sr., Van Nostrand Reinhold, New York City, NY, 1997
77	Kirk-Othmer Encyclopedia of Chemical Technology, 4th Ed., Pages 258, 272 and 291, Vol. 16, John Wiley & Sons, New York City, NY
78	Perry's Chemical Engineers' Handbook, 6th Ed., Page 23-42 to 23-49, Krisher and Seibert, McGraw Hill, New York City, New York

Examiner	Date	
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